

Noryl* Resin BN31

Americas: COMMERCIAL

Blowmoldable. Excellent processability and flammability. Good heat resistance. Low temperature impact strength. Dimensional stability.

Property

TYPICAL PROPERTIES ⁽¹⁾			
	Value	Unit	Standard
MECHANICAL			
Tensile Stress, yld, Type I, 50 mm/min	48	MPa	ASTM D 638
Flexural Stress, brk, 1.3 mm/min, 50 mm span	72	MPa	ASTM D 790
Flexural Modulus, 1.3 mm/min, 50 mm span	2410	MPa	ASTM D 790
IMPACT			
Izod Impact, notched, 23°C	267	J/m	ASTM D 256
Izod Impact, notched, -40°C	106	J/m	ASTM D 256
Gardner, 23°C	13	J	ASTM D 3029
Gardner, -40°C	33	J	ASTM D 3029
THERMAL			
HDT, 1.82 MPa, 6.4 mm, unannealed	82	°C	ASTM D 648
Relative Temp Index, Elec	95	°C	UL 746B
Relative Temp Index, Mech w/impact	80	°C	UL 746B
Relative Temp Index, Mech w/o impact	95	°C	UL 746B
PHYSICAL			
Specific Gravity	1.1	-	ASTM D 792
Mold Shrinkage, flow, 3.2 mm	0.6 - 0.7	%	SABIC Method
ELECTRICAL			
Hot Wire Ignition {PLC}	2	PLC Code	UL 746A
High Voltage Arc Track Rate {PLC}	4	PLC Code	UL 746A
High Ampere Arc Ign, surface {PLC}	2	PLC Code	UL 746A
FLAME CHARACTERISTICS			
UL Recognized, 94V-0 Flame Class Rating (3)	1.47	mm	UL 94
UL Recognized, 94-5VA Rating (3)	2.99	mm	UL 94
CSA (See File for complete listing)	LS88480	File No.	CSA LISTED
UV-light, water exposure/immersion	F1	-	UL 746C

Source GMD, last updated:01/05/2000

Processing

- Dry for recommended time and temperature as overdrying can cause loss of physical properties and/or create appearance defects.

Parameter	Value	Unit
Extrusion Blow Molding		
Drying Temperature	95	°C
Drying Time	2 - 4	hrs
Melt Temperature (Parison)	210 - 215	°C
Barrel - Zone 1 Temperature	205 - 215	°C
Barrel - Zone 2 Temperature	205 - 215	°C
Barrel - Zone 3 Temperature	205 - 215	°C
Barrel - Zone 4 Temperature	210 - 215	°C

Adapter - Zone 5 Temperature	210 - 215	°C
Head - Zone 6 - Top Temperature	210 - 215	°C
Head - Zone 7 - Bottom Temperature	215 - 220	°C
Mold Temperature	50 - 70	°C
Die Temperature	215 - 220	°C

Source GMD, last updated:01/05/2000

- As screw speed is increased, shear heating increases; reducing barrel temperatures helps keep melt temperature under control.
- Processing temperature must be measured with a hand-held probe as opposed to an internal-head probe.
- A reverse barrel profile may increase output while maintaining the melt temperature.

THESE PROPERTY VALUES ARE NOT INTENDED FOR SPECIFICATION PURPOSES.

PLEASE CHECK WITH YOUR [\(LOCAL SALES OFFICE\)](#) FOR AVAILABILITY IN YOUR REGION

(1) Typical values only. Variations within normal tolerances are possible for various colors. All values are measured after at least 48 hours storage at 23°C/50% relative humidity. All properties, except the melt volume and melt flow rates, are measured on injection molded samples. All samples tested under ISO test standards are prepared according to ISO 294.

(2) Only typical data for selection purposes. Not to be used for part or tool design.

(3) This rating is not intended to reflect hazards presented by this or any other material under actual fire conditions.

(4) Internal measurements according to UL standards.

Disclaimer : THE MATERIALS AND PRODUCTS OF THE BUSINESSES MAKING UP THE SABIC INNOVATIVE PLASTICS COMPANY, ITS SUBSIDIARIES AND AFFILIATES ("SABIC IP"), ARE SOLD SUBJECT TO SABIC IP' S STANDARD CONDITIONS OF SALE, WHICH ARE INCLUDED IN THE APPLICABLE DISTRIBUTOR OR OTHER SALES AGREEMENT, PRINTED ON THE BACK OF ORDER ACKNOWLEDGMENTS AND INVOICES, AND AVAILABLE UPON REQUEST. ALTHOUGH ANY INFORMATION, RECOMMENDATIONS, OR ADVICE CONTAINED HEREIN IS GIVEN IN GOOD FAITH, SABIC IP MAKES NO WARRANTY OR GUARANTEE, EXPRESS OR IMPLIED, (I) THAT THE RESULTS DESCRIBED HEREIN WILL BE OBTAINED UNDER END-USE CONDITIONS, OR (II) AS TO THE EFFECTIVENESS OR SAFETY OF ANY DESIGN INCORPORATING SABIC IP MATERIALS, PRODUCTS, RECOMMENDATIONS OR ADVICE. EXCEPT AS PROVIDED IN SABIC IP' S STANDARD CONDITIONS OF SALE, SABIC IP AND ITS REPRESENTATIVES SHALL IN NO EVENT BE RESPONSIBLE FOR ANY LOSS RESULTING FROM ANY USE OF ITS MATERIALS OR PRODUCTS DESCRIBED HEREIN. Each user bears full responsibility for making its own determination as to the suitability of SABIC IP' s materials, products, recommendations, or advice for its own particular use. Each user must identify and perform all tests and analyses necessary to assure that its finished parts incorporating SABIC IP materials or products will be safe and suitable for use under end-use conditions. Nothing in this or any other document, nor any oral recommendation or advice, shall be deemed to alter, vary, supersede, or waive any provision of SABIC IP' s Standard Conditions of Sale or this Disclaimer, unless any such modification is specifically agreed to in a writing signed by SABIC IP. No statement contained herein concerning a possible or suggested use of any material, product or design is intended, or should be construed, to grant any license under any patent or other intellectual property right of SABIC Innovative Plastics Company or any of its subsidiaries or affiliates covering such use or design, or as a recommendation for the use of such material, product or design in the infringement of any patent or other intellectual property right

* Noryl is a trademark of the SABIC Innovative Plastics Company

© 1997-2008 SABIC Innovative Plastics Company.All rights reserved